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BT—11—2016

FACULTY OF COMPUTER STUDIES

M.Sc. (Fourth Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(CBCS Pattern)

SOFTWARE ENGINEERING

(Digital Image Processing)

(Saturday, 19-11-2016) **Time : 2.00 p.m. to 5.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Write answers in brief and to the point.

(*iii*) Assume suitable data, if necessary.

1. Attempt the following (any *three*) : 15

   (*a*) Explain ID-DFT and its inverse.

   (*b*) Explain imwrite( ) in detail.

   (*c*) Explain high-pass filtering.

   (*d*) Explain digital image representation.

   (*e*) Explain visual perception.

2. Answer the following (any *three*) : 15

   (*a*) Explain showing images in Matlab.

   (*b*) Explain linear spatial filtering.

   (*c*) Explain logarithmic transformation.

   (*d*) Explain 2D-DFT.

3. Answer the following (any *three*) : 15

   (*a*) Explain Inverse Wavelet transform.

   (*b*) Explain imadjust( ) in detail.

   (*c*) Explain model of image degradation/restoration process.

   (*d*) Explain fundamental steps in DIP.

P.T.O.

4. Answer the following (any *three*) : 15

(*a*) Explain noise models in detail.

(*b*) Explain non-linear spatial filtering.

(*c*) Explain color spaces in Matlab.

(*d*) Describe image sampling and quantization.

5. Write short notes on any *three* : 15

(*a*) imhist( ) function

(*b*) Lights and electromagnetic spectrum

(*c*) Obtaining frequency domain filters from spatial filters

(*d*) Data classes

(*e*) Color image representation.

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